DT03 Rec'd PCT/PTO PTO/SB/21 (05-03)
Approved for use through 04/30/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE to a collection of information unless indisplays a valid OMB control number. are required to respond to a **Application Number** 10/501,442 TRANSMITTAL , Filing Date July 13, 2004 **FORM** First Named Inventor Janne KEROVUO Art Unit unassigned (to be used for all correspondence after initial filing) **Examiner Name** unassigned

Total Number of Pages in This Submission	9	Attorney Docket Number	D200	00-1WUS	
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	ENCI	OSURES (Check all that	apply)	·	
Fee Transmittal Form - 2 copies		Drawing(s)		After Allowance communication to Group	
Fee Attached  Amendment/Reply  After Final  Affidavits/declaration(s)  Extension of Time Request  Express Abandonment Request		cicensing-related Papers  Petition  Petition to Convert to a  Provisional Application  Power of Attorney, Revocation  Change of Correspondence Addre  Ferminal Disclaimer  Request for Refund	ess	Appeal Communication to Board of Appeals and Interferences Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) Proprietary Information  Status Letter Other Enclosure(s) (please Identify below): - Form PTO-1449 (3 pages + duplicate) - 53 references	
Information Disclosure Statement		CD, Number of CD(s)		- Return receipt postcard	
Certified Copy of Priority Document(s)  Response to Missing Parts/ Incomplete Application  Response to Missing Parts under 37 CFR 1.52 or 1.53			,		
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	TURE C	F APPLICANT, ATTORNE	EY, O	RAGENT	
Firm or Individual name	Reg. No.	47,320			
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Date January 6, 2005					
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This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PATENT

ATTORNEY DOCKET NO.: D2000-1WUS

mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia, 22313-1450, on January 6, 2005.

Lynn Linkowski

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

KEROVUO et al.

Art Unit:

unassigned

Application No.:

10/501,442

Examiner:

unassigned

Filed:

July 13, 2004

Conf. No:

8134

Title:

A Pectate Lyases, Nucleic Acids

Encoding Them and Methods for

Making and Using Them

### Mail Stop Amendment

Commissioner for Patents P.O. Box 1450 Arlington, V.A., 22313-1450

### INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97 & 1.98

Dear Sir:

In accordance with 37 C.F.R. §1.97 & 1.98, Applicant submit for consideration in the above-identified application the documents listed on the attached Form PTO-1449. Copies of the documents are also submitted herewith. The Examiner is requested to make these documents of record.

The Information Disclosure Statement is submitted:

Within three months of the application filing date or before mailing of a first Office Action on the merits; accordingly, no fee or separate requirements are required.

In re Application of: KEROVUO et al.

Application No.: 10/501,442 Filing Date: July 13, 2004

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Attorney Docket No.: D2000-1WUS

Applicants would appreciate the Examiner initialing and returning the Form PTO-1449, indicating that the information has been considered and made of record herein. A duplicate copy of the Form PTO-1449 is included herein for the Examiner's convenience.

The information contained in this Information Disclosure Statement under 37 C.F.R. §1.97 & 1.98 is not to be considered as a representation that: (i) a complete search has been made; (ii) additional information material to the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

Although no fee is deemed necessary in connection with the filing of this Information Disclosure Statement, the Commissioner is hereby authorized to charge any fees associated with this communication or credit any overpayment to Deposit Account No. 50-0661.

Respectfully submitted,

Date:

Diversa Corporation

**Intellectual Property Department** 

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Sheet 1 of 3

# URE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Application Number 10/501,442

Filing Date July 13, 2004

First Named Inventor

KEROVUO, Janne

Docket Number D2000-1WUS

Examiner Name To Be Assigned

Art Unit To Be Assigned

Mailing Date Januray 6, 2005

			U.S. PATENT DOC	UMENTS	
Examiner Initials	Cite No. <sup>1</sup>	Publication Date (MM-DD-YYYY)	Document No. Number-Kind Code² (if known)	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
M. S. C.	1.	11/29/1988	4,788,066	Witt	
	2.	12/10/1996	5,582,681	Back, et al.	
	3.	02/25/1997	5,605,793	Stemmer	
	4.	01/20/1998	5,709,796	Fuqua, et al.	
	5.	11/03/1998	5,830,696	Short	
	6.	08/17/1999	5,939,250	Short	
	7.	11/09/1999	5,980,581	Patterson, et al.	
	8.	01/25/2000	6,017,751	von der Osten, et al.	
	9.	02/08/2000	6,021,536	Wasinger, et al.	
	10.	02/15/2000	6,024,766	Wasinger	
	11.	05/23/2000	6,066,233	Olsen, et al.	
	12.	06/20/2000	6,077,316	Lund, et al.	
	13.	03/06/2001	6,197,070 B1	Horner, et al.	
	14.	06/05/2001	6,241,849 B1	Franks	
	15.	07/17/2001	6,261,828 B1	Lund	
	16.	07/24/2001	6,264,925 B1	Fuglsang, et al.	
	17.	10/30/2001	6,309,871 B1	Outtrup, et al.	
	18.	12/11/2001	6,329,333 B1	Merz, et al.	
	19.	12/25/2001	6,333,301 B1	Kamiya, et al.	
	20.	04/02/2002	6,365,561 B1	Vinson, et al.	
	21.	04/09/2002	6,368,843 B1	Andersen, et al.	
	22.	06/04/2002	6,399,561 B1	Schneider, et al.	
	23.	07/10/2001	6,258,590 B1	Lange, et al.	

**EXAMINER:** 

DATE CONSIDERED:

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Sheet 2 of 3

#### INFORMAT OSURE STATEMENT BY **APPLICANT**

(Use as many sheets as necessary)

Application Number	10/501,442
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Filing Date July 13, 2004

First Named Inventor KEROVUO, Janne

Docket Number D2000-1WUS

Examiner Name To Be Assigned

Art Unit To Be Assigned

Mailing Date Januray 6, 2005

24.	06/15/1999	5,912,407	Miller, et al.	
 25.	12/19/2000	6,162,260	Liu, et al.	
 26.	06/04/2002	6,399,351 B1	Bjornvad, et al.	
 27.	08/06/2002	6,429,000 B1	Andersen, et al.	
 28.	06/25/2002	6,410,064 B1	Akazawa	
29.	02/13/2001	6,187,580 B1	Andersen, et al.	
 30.	04/24/2001	6,221,406 B1	Meschonat, et al.	
 31.	04/22/2003	6,551,358 B2	Miller, et al.	
32.	10/03/2002	2002/0142438 A1	Andersen, et al.	
33.	08/22/2002	2002/0115194 A1	Lange, et al.	
 34.	02/27/2003	2003/0040454 A1	Cuperus, et al.	

		]	FOREIGN PATENT D	OCUMENTS		
Examiner Initials	Cite <sup>1</sup> No.	Publication Date (MM-DD-YYYY)	Document No. Country Code <sup>3</sup> - Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
	35.	07/28/1993	EP 0552728 A1	Japan Tobacco Inc.		
	36.	10/17/2002	WO 02/081815 A2	Novozymes A/S		
	37.	11/21/2002	WO 02/092741 A2	Novozymes A/S		
	38.	01/09/2003	WO 03/002705 A1	Novozymes North America, Inc.		
	39.	01/09/2003	WO 03/002810 A1,	Novozymes North America, Inc.		
	40.	06/01/1995	WO 95/14807 A1 ,	Novo Nordisk A/S		
	41.	01/16/1997	WO 97/01629 A1	Novo Nordisk A/S		
	42.	06/11/1998	WO 98/24965 A1	Novo Nordisk Biochem North America, Inc.		

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Sheet 3 of 3

Substitute Form 1449/P	
INFORMATION DISCLOS	URE STATEMENT BY
APPLIC	ANT

(Use as many sheets as necessary)

Application Number 10/501,442	Filing Date July 13, 2004
First Named Inventor KEROVI	JO, Janne
Docket Number D2000-1WUS	
Examiner Name To Be Assigned	Art Unit To Be Assigned

Mailing Date Januray 6, 2005

#### NON PATENT LITERAURE DOCUMENTS Cite1 Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), Examiner T<sup>6</sup> No. title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, volume-issue Initials number(s), page(s), publisher, city and/or country where published. AL-HOOTI, "Chemical composition and quality of date syrup as affected by 43. pectinase/cellulase enzyme treatment, Food Chemistry, 2002, 79:215-220. BARTLING, "Synergism between Erwinia pectate lyase isoenzymes that 44. depolymerize both pectate and pectin", Microbiology, 1995, 141:873-881. ESSA, et. al., "Effect of macerate enzymes on the yield, quality, volatile compounds 45. and rheological property of prickly pear juice", Nahrung/Food, 2002, 46(4):245-250. ESSA, "Effect of pectinase enzyme treatment on the rheological, physical and 46. chemical properties of plum, banana and guava juices", Polish Journal of Food and Nutrition Sciences, 2002, 11(3):13-19. HOONDAL, et. al., "Microbial alkaline pectinases and their industrial applications: a 47. review", Applied Microbiology and Biotechnology, 2002, 59:409-418. HURLBERT, et. al., "Differences in the solution structures of the parallel β-helical 48. pectate lyases as determined by limited proteolysis", Biochimica et Biophysica Acta, 2002, 1599(1-2):9-20. ANGAYARKANNI, et. al., "Improvement of Tea Leaves Fermentation with 49. Aspergillus ssp. Pectinase", Journal of Bioscience and Bioengineering, 2002, 94(4):299-303. MALATHI, et. al., "In Vitro Evaluation of Nonstarch Polysaccharide Digestibility of 50. Feed Ingredients by Enzymes, *Poultry Science*, 2001, 80(3):302-305. NASUNO, et. al., "Polygalacturonase of Erwinia carotovra", J. Biol. Chem., 1966, 51. 241:5298-5306; REVILLA, et. al., "Addition of pectolytic enzymes: an enological practice which 52. improves the chromaticity and stability of red wines", International Journal of Food Science & Technology, 2003, 38(1):29-36. TAMARU, et. al., "Pectate lyase A, an enzymatic subunit of the Clostridium 53.

EXAMINER:	DATE CONSIDERED:

cellolovorans cellulosome", PNAS, 2001, 98(7):4125-4129.

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